

WE CLAIM

1. A method of pagewidth printing, the method comprising the steps of:
feeding a print medium through a printing zone; and
ejecting drops of ink at a rate of at least one billion drops per second from a print assembly on to the print medium in the printing zone to generate an image on the print medium.
2. A method as claimed in claim 1, which includes the step of ejecting at least ten
10 billion drops per second from the print assembly on to the print medium.
3. A method as claimed in claim 2, which includes the step of ejecting at least twenty billion drops per second from the print assembly on to the print medium.
4. A print assembly for pagewidth inkjet printing, the print assembly comprising
an elongate carrier that is mountable on a support structure of a printer in an
operative position with respect to a platen of the printer;
a number of printhead chips that are positioned on the carrier, the printhead chips
together defining a printhead that is configured to eject at least one billion drops per second
20 into a printing zone defined between the printhead and the platen of the printer; and
control circuitry that is also positioned on the carrier and that is configured to
control operation of the printhead chips
5. A print assembly as claimed in claim 4, in which the printhead chips together define
a printhead that is configured to eject at least ten billion drops per second into the printing
zone.
6. A print assembly as claimed in claim 5, in which the printhead chips together define
a printhead that is configured to eject at least twenty billion drops per second into the
30 printing zone.
7. A print assembly as claimed in claim 6, in which the printhead chips together
incorporate at least one hundred thousand nozzle arrangements.

8. A print assembly as claimed in claim 7, in which the printhead chips together incorporate at least two hundred thousand nozzle arrangements.
9. A print assembly as claimed in claim 8, which includes between forty and one hundred printhead chips positioned on the carrier.
10. A print assembly as claimed in claim 4, in which each printhead chip is the product of an integrated circuit fabrication process.
- 10 11. A print assembly as claimed in claim 10, in which each printhead chip includes a wafer substrate and a CMOS drive circuitry layer positioned on the wafer substrate with the nozzle arrangements positioned on the wafer substrate and the CMOS drive circuitry layer.
12. A print assembly as claimed in claim 11, in which each nozzle arrangement is in the form of a micro electro-mechanical system that is electrically connected to the CMOS drive circuitry layer.
- 20 13. A print assembly as claimed in claim 12, which includes a plurality of printhead modules, each printhead module incorporating a printhead chip, the printhead modules being mounted on the carrier.
14. A print assembly as claimed in claim 13, in which a flexible printed circuit board is mounted on each printhead module and connected between the CMOS drive circuitry layer of each printhead chip and the control circuitry.
- 30 15. A print assembly as claimed in claim 14, in which the printhead modules are configured so that the printhead chips are each positioned at a common angle of greater than zero degrees and less than ninety degrees with respect to a line extending a length of the printing zone, so that consecutive printhead chips overlap at their ends.
16. An inkjet printer that comprises
a support structure;

a platen positioned in the support structure;
a print assembly positioned operatively with respect to the platen, the print assembly comprising
 an elongate carrier;
 a number of printhead chips positioned on the carrier, the printhead chips together defining a printhead that is configured to eject at least one billion drops per second into a printing zone defined between the printhead and the platen; and
 control circuitry that is also positioned on the carrier and that is configured to control operation of the printhead chips; and
10 a feed mechanism positioned on the support structure for feeding a print medium through the printing zone.